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LEADING ARTICLES

INFANT MORBIDITY AND INFANTS' MILK DEPOTS*

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NEW YORK CITY.

With the development of santation and hygiene the average length of life has moved onward. The average age at death during the 17th century was 18 years. Vaccination as a preventative of smallpox, antitoxin as a preventative as well as curative of diphtheria represent two especial factors in lessening the mortality during infancy and childhood so that the average age at death during the 19th century was 36 years. The right to live has long been asserted and long been admitted, but humanity is just beginning to appreciate that to realize its right to live the public health must be conserved and preventable diseases must be prevented. The ancient evolutionary doctrine of the survival of the fittest is gradually being supplanted by the revolutionary principle of the survival of the weakest. Mortality rates do not tell half the story of disease, helplessness, suffering and misery. When one pauses to contemplate the fact that the ratio of morbidity to mortality is as five is to one, the enormity of the problem of prevention becomes patent. Fifty thousand babies die annually in the United States from preventable causes. Think of the preventable morbidity. The lessening of mortality may be due to improved methods of treatment or the lessened virulence of an epidemic of any type of disease. The lessening of morbidity cannot be determined by reason of the lack of morbidity statistics save of a few contagious diseases in a very limited registration area.

In New York City in 1907, 17,436 babies died under one year of age, while 25,795 died under five years. In 1908, 16,230 died under one year, and 24,140 under five years. The decrease is small, but it is significant. The deaths from diarrhea and enteritis in 1907 were 6,611, while in 1908 they fell to 6,190. The total number decreased undoubtedly from a lessened morbidity due to heightened education of the tenement population in infant hygiene and the extension of facilities for securing proper milk for infants and young children. Fully 12,500 of the deaths in New York City of children under one year were preventable. 'Tis more blessed to prevent than to cure. The high infant death rate is not in itself a crime—the crime consists in allowing the children to become sick from a preventable disease. In England and Wales, in 1904, the total death was 549,393. The deaths under one year numbered 137,490. One child out of every seven born failed to reach one year of age. And one-third of these babies died from preventable causes. In Munich in 1903, 4,075 babies died; 83 per cent of these deaths occurred in children artificially fed. The first year mortality of all Germany showed 51 per cent in artificially fed children, while only 8 per cent were among breast fed infants. Budin in Paris, reported only 9.5 per cent deaths in breast fed infants. Dr. Hope, of Liverpool, estimated (1884-1886) that 15 bottle fed infants died to every one infant dying while securing breast milk. Breast feeding is a tremendously important factor in infant hygiene. Breast feeding is a life saver.

The problem of high infant mortality is not a question merely of congestion. In 1906 the United States registration area showed the deaths under one year to be as follows: urban, 210.1 per 1,000 total deaths; rural, 185.8 per 1000 total deaths. While in the congested districts of New York the

*Read before the Wyoming Valley Medical Society, Wilkesbarre, Pa., April 29, 1909.

rate may go from 140 to 150 per 1000, as high as 200 to 400 per 1000, congestion must not be accounted the sole cause. The thickly congested Borough of Manhattan frequently has a low mortality rate, as for example, during 1908, 16.45 while the sparsely settled Borough of Richmond may have a rate of 19.48. I attribute this striking fact to the attention concentrated in congested districts for purposes of education, home nursing, dispensary and hospital care, etc., whereas, such prophylactic measures have been neglected in the less densely populated sections of the city. The fact remains that fully 12,500 babies under one year died of preventable causes in New York City in 1907; and 50 per cent of the deaths of children under one year in the summer time were due to preventable summer complaint. The name is excellent if properly understood, such deaths are a summer complaint against conditions which are preventable. Rectify the conditions and there will be no summer complaint of either kind. But let the complaint be all year around while one-sixth of all children born into the United States die before the end of the first year, and while nearly one-half of these die from gastro-enteric causes. As early as 1859 Dr. William Moore stated before the Dublin Obstetrical Society that he believed the proportion of deaths in England during the first year was one out of every six children born.

Hygiene of the home is not the sole factor in producing the high infant mortality. At Randall's Island were gathered children from all nationalities, various sections of the city, living under the same hygienic conditions, properly clothed, receiving the same food and water, and under the same general care. The death rate was 44.36. It was reduced by one single measure to 19.80. What produced this remarkable alteration and saving of life? The general regime remained unaltered, but the milk was pasteurized, whereas, previously it had been used in its raw state. The milk and only the milk was changed to achieve this result.

Milk is the particular source of sickness and death in infancy and early childhood. About only 25 per cent of mothers in affluent families nurse their children for three months. The other 75 per cent allow their children to become "parasites on the cows." In tenement populations about 90 per cent of the infants are nursed for nine months. Why is there such traditional dread of the second summer? The second summer represents the period when children of the tenements particularly are weaned and get the bulk of their nourishment in the form of cow's milk, and the summer represents the period of the most unsanitary milk supply. Dr. Hurty, secretary of the Indiana Board of Health, states that 65 per cent of the total deaths in children in. America is due to poisons in impure food This appears startling, but when one appreciates that in New York City in 1902, out of 3970 samples of milk investigated 2095 (52.77 per cent) were found to be adulterated, the truth of it becomes more apparent. Dr. Kober has collected the records of 195 epidemics of typhoid fever, 99 epidemics of scarlet fever, and 36 epidemics of diphtheria due to milk. Milk is a source of disease as well as a source of nutriment. The bacterial content of milk in general is woefully high. And Soxhlet of Munich, did not add a pleasant fact for us to think about when he determined that 90 per cent of the bacteria in milk were of fecal origin. In New York City the bacterial limit for inspected milk is 100,000 per 1 cc. Starting with even such a comparatively clean milk, how may millions of bacteria are there per 1 c.c. when the consumer ingests it? Petrushy has demonstrated that at room temperature milk containing only 300 bacteria per 1 c.c. will contain within 24 hours 10,000,000 per 1 c.c. If the milk is kept at 50 deg. there will only be 30,000 bacteria per 1 c.c. But there are only ten cities in the United States which have a law requiring milk to be kept a 50 deg. until delivered to the consumer. Milk refrigeration is important. There are very many homes where clean milk can not be kept clean because of the absence of refrigerators of any kind. In some sections of New York 50 per cent to 80 per cent of the families have absolutly no means of keeping even certified milk during the summer so that it will be a clean milk by the time the infant gets the last two feedings during the 24 hours.

That infant mortality can be greatly reduced is best shown by the work of Dr. Miele in Ghent, Belgium, where by a system of creches, infant hospitals, milk depots, and dispensaries the death rate of the children of members of the co-operative societies was reduced from 350 per 1,000 to 40 per 1,000.

The milk depots of New York endeavor to accomplish the following results:

1. They encourage breast feeding constantly; if necessary supervise mixed feeding; when the breast fails to supply the proper formulae for the babies.

2. They supervise the weaning of babies

and advise the mother how to care for her breasts during the time of weaning.

3. They give hygienic supervision of healthy children.

4. They provide instruction for mothers in infant hygiene.

5. They supply correctly modified and carefully prepared formulae for infant feeding.

6. They maintain consultations and weekly hold baby shows.

7. They provide milk relief for those unable to pay for their milk.

8. They secure adequate milk for the use of nursing mothers.

The milk depots are not clinics nor dispensaries, but are places established for the care of healthy children in order to prevent their becoming sick from the preventable causes over which they can maintain control. Their purpose is disease prevention, not disease cure.

The causes of infant morbidity are numerous and interacting. Congestion, bad housing, unventilated rooms, malnutrition of nursing mothers, decline of breast feeding, employment of pregnant women and mothers, poor hygiene, lack of maternal and paternal education, neglect, well-intentioned, but ill-advised care of babies by "little mothers," alcoholism, illegitimacy, syphilis, etc.

The problem is being attacked from all sides and results are becoming marked. The general infant mortality of the United States decreased from 246 per 1000 in 1880 to 159 per 1000 in 1890 and is growing less yearly.

Milk depots may be opened anywhere, in drug stores, groceries, dispensaries, settlements, parish houses or specially established stores. The milk utilized should be certified milk coming from tuberculin tested cattle, have less than 30,000 bacteria per 1 c.c., be less than 36 hours old, and be kept below 50 deg. until delivered to the consumer. Bacterial tests should be made at every stage: immediately after milking; after delivery in the 40 quart can, and after modification in the milk laboratory, in order to control every step in the production of a clean, infant's milk food. The employees at the farm, dairy, and milk laboratory should be thoroughly trained in milk hygiene, efficient in personal hygiene, and examined from time to time to ensure their being free from possible disease.

Formulae should be simply made so as to require as little manipulation of the milk as possible. The ideal method is to have no formulae but individual modification for each infant to be fed. If Pasturization is desired the modified milk should be heated to 167 deg. for twenty minutes. After modification and Pasteurization the bottles previously corked with sterile corks should be placed in delivery crates and covered with ice. The orders for each succeeding day should be delivered at night, detailing the number of bottles and the number of ounces in each bottle desired of each formula listed. In New York City there are in use seven formulae for winter and six formulae for summer use.

The price of each feeding will necessarily vary in different sections of the country. In New York the prices vary from one-half cent for each one ounce feeding to two and one-half cents for each eight ounce feeding. The price of a modified certified milk must of necessity be higher than the ordinary loose or bottled milk distributed by the milkman.

A trained nurse is an essential part of a successful infant milk depot plan, and upon her depends to no small extent the success or failure of the educational campaign. She must possess not alone an excellent knowledge of infant hygiene but the ability to impart it to anxious mothers. To an attractive personality there must be linked alertness of mind, a broad sympathy, a social spirit and a discerning judgment. If possible there is much gain if the nurse can speak the language of the people among whom she is to work. If she belongs to the same nationality as the majority of her clientele, so much the better. The nurse organizes the milk station by bringing it to the attention of the mothers of the neighborhood, by interesting them in the plan to keep their children well and by manifesting her own interest in the welfare of their children. She is not merely a milk distributor. She must be to the mothers a teacher and equally important an understanding friend whose advice is to be sought and relied upon. When a mother brings in her child for the first time, the baby is totally undressed, weighed, and examined for evidence of congenital disease, deformities, errors of neglect, etc. The question of nourishment is investigated. If breast feeding is possible, it is continued. If artificial feeding is imperative, then a formula is prescribed for the child by the physician in charge of the station. The mother then sends or calls for the whole day's feeding each morning. The day's food in individual bottles ready for feeding is given along with sufficient ice to keep it cold.

At stated intervals during the week a physician holds a consultation. The only

equipment needed for this class work is a pair of accurate scales. Before the weighing of each child a clean piece of tissue paper is placed on the pan of the scale. Each child should be weighed at least once a week. There are three methods of conducting consultations: 1. The physician may give individual instruction to each mother regarding the hygiene and feeding of her own infant. 2. The physician may give a short formal talk to all the mothers at one time, and then take up each particular child as an individual problem with its own mother. 3. The group method of talking all the time to all the mothers using each child as a text for hygienic instruction. I have found the third method the most valuable and economical in time, and by all odds the most productive of results. Each mother gets by vicarious experience the benefits of the errors made by all the other mothers. The advantages of this particular method of group instruction I have described elsewhere.* The physician must realize the importance of hygienic education as a factor in lessening infant morbidity. Emphasis must be constantly placed upon the necessity of maternal nursing—first, last, and all the time, unless there is some real reason that makes artificial feeding an indicated measure. Using individual children as texts by noting the errors made by their mothers the physician must educate the mothers about the advantages of breast feeding, regularity of feeding, the dangers of artificial feeding, the care of bottles and nipples, bathing, ventilation, dangers of pacifiers, tight binders, shaking babies, the care of the first teeth, care of eyes at birth and later, care of ears, how to dress the babies, etc.

A weight chart is of service to interest the mother in the progress of her own child—but a chart of the vitality of the infant is of greater importance. The difference between fat and vitality must be brought home to the mothers in order that they may appreciate the necessity of proper feeding instead of merely fattening foods, which may lead to rickets, and even malnutrition. The charts should be elastic and should have in addition a few fundamental facts, such as the name, address, date of birth, weight at birth, etc. The chart should be ruled off into spaces—one for each week of the year. When the child is first seen the physician estimates the vitality of the child by its general physical condition, family history, past medical history, etc. As the child returns to the successive consultations the decision is made as to whether the vitality is higher or lower. The results of these various judgments are indicated on the charts by dots. The charts are cross-lined and scored from zero to 100. From 0-10 is indicated as moribund, 10-25 bad, 25-50 poor, 50-60 fair, 65-80 good, 80-95 excellent, 95-100 perfect. The rising line will at a glance show graphically the vital betterment of the child while under the supervision of the consultation. And the mothers are tremendously encouraged to learn weekly of the gain their youngsters have made.

Have the milk depots of New York accomplished anything? 2256 babies have been cared for with only 82 deaths. All the records of deaths have not yet been collected for analysis. During last summer, however, there were only 37 deaths and careful investigation revealed the striking fact that the milk stations could be held responsible for only two deaths, and possibly in one other case; but in no way could the stations be held responsible for the other 34 deaths, which were due to pneumonia, pertussis, etc., and not from gastro-enteric disturbances, nor any other causes attributable to an infected milk supply.

As an evidence of summer feeding let me take the week ending August 31, 1908. There were 319 babies being fed daily. Of this number 77.4 per cent were gaining in weight and vitality; 9.7 per cent were stationary, while only 12.9 per cent were losing during that one week. It must be recalled that the children represent the poorest types to be found, born to live in spite of their parents ignorance, merely because of the lack of home hygiene and limited funds. Ignorance of infant hygiene is common to the so-called better classes as well as to the more unfortunate classes. On March 31st the milk depots were feeding 616 babies. The power for lessening morbidity is not represented in the 616 babies, but in the 2256 mothers who have been advised and instructed in the care of infants. The general educational value is the one to be accentuated not merely the more particular improvement in the condition of individual children. As one of the tools for the educational work, it is necessary to use the children. Their physical improvement is a tangible weapon by the proper use of which a vigorous assault on ignorance of infant hygiene can be made.

For example, the average gain of 28 babies at my last consultation was 6¾ oz. When the mothers learn that is above the average, the methods by which it was

*The Dietetic and Hygienic Gazette, May, 1909.

secured make a greater impression upon them.

Some other figures demonstrate this better. At one time I took all the babies at my consultation who had been there at least one month and averaged their weights on entrance and at the time in question. There were 32 babies in all. Their ages on entrance varied from 2 weeks to 107 weeks. The average time in attendance at the consultations was 15 weeks and 4 days. The average gain during this period of time was 4 pounds 13.4 oz.

The average age on admission was 25 weeks, 2 days.

The average weight on admission was 13 lbs, 6.4 oz.

The theroetical weight on admission should have been 15 lbs. 8 oz.

The average under weight was 2 lbs,2 oz.

The average age after the average time 15 weeks 4 days was 40 weeks 6 days.

The average weight after the average time, 15 weeks 4 days, was 18 lbs., 1.9 oz.

The theoretical weight at 40 weeks 6 days should have been 17 lbs. 8 oz.

The average overweight was 9.9 oz.

In other words, under proper feeding for the children with careful training of the mothers in infant hygiene, the tenement house babies improved from under-nourished subnormal babies to children with a physical development higher than the average child of the same age in all stations of life.

More important still is the education of the 3,000 mothers who have gone through the milk depots during the year, and of greater and inestimable value are the many thousands of mothers to whom the benefits of consultation, advice will be carried by the mothers the milk depots have trained. Let me repeat again, the greatest gain in the prevention of infantile morbidity will come through the education of mothers in infant hygiene, and a practical demonstration of the value of the lessons by showing them the improvement in the general health of their own infants. Feed the mother's mind and the baby's stomach, and the needs of both both will be so satisfied as to assist materially in the happiness and health of the individuals, their families, and the community in which they live.

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Surgeon-General Walter Wyman, of the public health and marine hospital service of the United States, as the guest of the Atlanta School of Medicine, at its last commencement exercises of which institution he delivered the principal address.

SOME REASONS FOR BELIEVING IN AND ENCOURAGING BRAIN SURGERY.*

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QUINCY, ILL.

In these days, when there is practically no doctor too timid to invade the peritoneal cavity, it is astonishing to observe the reluctance, on the part of these same peritoneally brave operators, toward attempting any operation on the brain. There are several reasons for this state of affairs, each of more or less weight. There is, first, the fear of attacking a so-called vital part, the same fear there might be in attacking a surgical condition of the heart. Then there is the history of less brilliant results from the brain surgery. Next, the difficulty in locating the particular point of disease or injury in the brain, as compared to the abdominal cavity, or in other words, the greater uncertainty in diagnosis. The abdomen has become an open book, and even he who runs may read, while some who read with difficulty unhesitatingly do laparotomy that the deficiency may be overcome by sight and touch. The brain, on the other hand, calls for accuracy in diagnosis, for one does not feel like removing enough of the calvarium to allow introduction of the hand, and brain convolutions cannot be pushed aside, or pulled out, like the coils of intestine, to allow the eye to assist in the search for hidden trouble.

This weakness in diagnosis produces a distaste for operation by selection, and usually delays operation until, if it is done, it is done from necessity.

These considerations taken as a whole, have led me to the production of this paper, and an effort will be made to show that the brain is a good field for surgery, for early surgery, and for bold surgery.

There are many cases of brain injury on record where the patients, with or without operation, made seemingly miraculous recoveries. These recoveries are at once so numerous and so apparently wonderful that but one conclusion can be drawn, and that, that the brain is an insensitive, long-enduring structure. Furthermore, when these cases are classified one must decide that by far the greater portion of brain substance, and brain area, is not a vital part of the human economy.

Also that focal symptoms arising from injury, or operation, need not be permanent. Still further, that in death from brain injury the majority of patients die from sepsis, or from pressure resulting from the

*Paper prepared for the Missouri Valley Medical Society.

injury, rather than from the injury itself.

There has been no attempt to form any long list of cases of extensive brain injury, where with or without operation, the patient recovered, but to prove the point that by far the larger portion of the brain need not be considered a vital part, let me cite the following cases:

Reported by—

Lawrie—Scotland Med. and Surg. Jour.—A gunshot wound of the occipital lobes, with recovery.

Drew.—Brit. Med. Jour.—Gunshot wound of the motor area, operation and removal of the ball after five days. Recovery.

Rehn—Centralblatt feur Chir.—Gunshot wound; ball in the cavernous sinus. Removed on the sixth day. Recovery.

Mingus—Am. Med. Jour.—Two compound comminuted fractures involving the vertical portion of the frontal bone, the orbital ridge, the orbital roof, the great wing of the sphenoid, the horizontal plate of the ethmoid, and the right parietal. Complete destruction of the left frontal lobe of the brain. Lived nine days.

Pope—Am. Med. Jour.—Attempt at suicide by driving nail into brain. A three inch nail was driven in full length in suture between parietal bones. Pus followed withdrawal of the nail as it was not discovered not discovered for several days. Recovery.

Lindsay—Am. Med. Jour.—Gunshot wound passing from temple to temple. Recovery.

Baldwin—Columbus Med. Jour.—Injury opening the lateral ventricle. Recovery.

Binkley—Nashville Jour. of Med. and Surg.—Gunshot wound of motor area of brain. Recovery.

Bloxam—Lancet—Gunshot laying bare and traversing the brain. Ball removed from temporal fossa on opposite side. Recovrey.

Nancrede—Phil. Med. News—Gunshot of anterior lobes. Ball deflected by base of skull. Recovery.

Parsons—Brit. Med. Jour.—Gunshot wound of cerebral hemispheres with hemiplgia. Complete recovery.

Evans—Am. Jour. of Surg. and Gyn.—Piece of wood removed from floor of skull after thirty-two years in situ. Knife blade from left frontal lobe after eighteen years in situ. Recovery.

Bell—Brit. Med. Jour.—Gunshot of head, the ball entering the temple just back of the orbit, and emerging on the opposite side of the head. Recovery, with loss of sight on the side of entrance.

I will refer, also, to a case of hemorrhagic encephalitis reported by myself on another occasion. This case had extensive destruction of brain tissue due to the tremendous intracranial pressure, and to the punctuate hemorrhages, and it was estimated that at least one-fourth of an ounce of broken down brain substance ran out when the operation was made. This case recovered completely.

From the Index Catalogue of the office of the Surgeon-General, U. S. A., I find recorded 34 cases of extensive brain injury, mostly gunshot wounds, where the patients recovered. From the summary of statistics compiled by the Boston Medical and Surgical Journal, subsequent to the Spanish-American war, it is found that "perforating wounds of the brain if not immediately fatal, are recovered from without operation in the majority of cases."

Quoting also from Senn's admirable history, medical and surgical, of the Spanish American war: "To my own knowledge a number of gunshot wounds of the head that survived long enough to be transported to the general hospital at Siboney, died within twelve days of the receipt of injury. In all cases intracranial infection was the immediate cause of death. Encephalitis and lepto-meningitis constituted the fatal complications."

Before relating my final case to prove my point, let me give this as a working formula for brain surgery. Barring accidents to blood vessels with consequent pressure from blood clot, aseptic surgery of the brain done before inflammation has begun, is safe surgery anywhere in the cerebrum outside and beyond the corpus callosum. In other words, the corpus callosum marks the dividing line between the safe and the more unsafe surgical procedures.

History of B. D., male, age 10 years. A gunshot wound of the head from a rifle carrying a 22 caliber long ball. The ball entered the head on a level with, and one-half inch to the right of the occipital protuberance, and as the boy was running forward when shot, it was likely that the course of the ball was at least a little upward. The case did not reach my hands until three days after the injury, but the history shows that the child never became entirely unconscious. Immediately, or at least very soon after the injury, it was discovered that he was totally blind. On the third day when I saw him he had a temperature of 103 F., intermittent pulse, unequal pupils, was semi-comatose, had no use of the right hand, but could move the arm; perceptive faculties extremely sluggish; incontinence of urine, and an infected bullet

tract. The wound had been probed, so a drain was passed up, following the direction a 22 calibre bullet probe took. This drain was inserted for a distance of two and one-half inches. For about a week the case improved in every way except vision, and the focal symptoms of the right hand. Then the temperature rose again, hernia cerebri developed, and the boy complained of more and more pain, always referring the pain to the right frontal eminence. This point was directly opposite the point of entrance as shown by the direction taken by the bullet probe, and as would be expected from the history of the position of the patient when shot.

Thinking that the ball might be lodged at this point, and might be the cause of an anterior infection, operation was done the fourteenth day after the injury. The chiseled opening at the right frontal eminence disclosed blood clot, and broken down brain tissue, but no bullet. The point of entrance posteriorly, was then enlarged, and the bullet probe passed boldly along the track of the ball for a distance of five inches. Anteriorly a thin grooved director was used in four directions, searching for pus. None was discovered anteriorly, but the probe from behind opened a pocket from which about a dram escaped. Gauze drainage was used anteriorly, and a five and one-half inch rubber tube posteriorly. The patient was put to bed in a condition as good, or better, than before the operation. I say "or better" because he had exhibited sighing respiration continuously since the injury, and this symptom disappeared after removal of the pressure anteriorly, and the drainage of the abscess posteriorly. The drainage in front was removed the fifth day. The tube in the posterior wound was in place for eleven days, and the channel and cavity irrigated daily. During irrigation, as the pressure within the brain increased, the sighing respiration would again become evident. About ten days after operation the boy could distinguish light from darkness, and sight once established, improved rapidly. One curious phenomenon was his inability to judge distance. He would try to reach some article on the other side of the room, thinking it was within easy reach, or if a cup of water was offered him he was quite likely to pass the hand the full length of the arm beyond the cup, nor could he tell as he looked at the cup and hand which was the nearer to him. Also, he had for a time, double vision, and magnification and confusion of color sense. The further recovery of the case was wholly uneventful, all functions being completely restored.

Skiagraphs of this case show several points of interest. (These were taken one year after the injury.)

1st. That the ball lies on the left side of the head, apparently just internal to the arm center of the Rolandic area on this side. I believe that it was disturbance of circulation in the arm and hand center, rather than an actual pressure from the ball, or than destruction of brain tissue, that caused the right hand paralysis.

The skiagraph shows also the point of opening at the right frontal eminence. There is no doubt that the ball impinged at this point, and striking a rounding surface of bone was deflected to the left. Fluhrer and Delbet have noted richochet with the deflected bullet taking a secondary course.

Now, following the course of this ball, we find that it passed through the right occipital lobe of the brain—the vision center. It then left the cortex passing internal to the ascending parietal convolution —the center for movements of the fingers and wrist. It evidently passed internal to the centers for the hand, mouth, lips and tongue on the right side of the brain, for while all of these centers, as well as that for hearing, were disturbed, there was no loss at any time, but rather a retardation of function. The frontal convolutions which must have been traversed twice, gave no functional evidence of destruction, i.e., there was no loss of the lateral motion of the head or eyes, nor of the elevation of the eyelids. The ball must have traversed a plane just a trifle superior to the corpus callosum, thus passing external to the right lateral ventricle. In this case it was evident there was but little disturbance created by the destruction of arteries, for there were practically none of the usual symptoms attendant on brain hemorrhage with blood clot, except that caused by the anterior hemorrhage which manifested itself by the pain sense, and by the sighing respiration.

Reasoning, then, from this case, and from the others referred to, I cannot help thinking that the cerebrum offers a good field for surgery, for safe surgery, and that such work done early, and under the usual aseptic precautions, will give as brilliant results as are now obtained in the abdomen.

I will go still further and say that a deferred operation for brain injury is subjecting the patient to unnecessary risk—that of sepsis—and operation then is operation under disadvantageous circumtances.

The day is coming when a perforating wound of the brain will call for immediate operation to establish drainage, or to make needed repair, the same as a perforating wound of the abdomen now calls for immediate laparotomy.

THE SURGICAL TREATMENT OF TUBAL INFLAMMATION AND PELVIC ABSCESS.*

C. R. DUDLEY, M. D.

HANNIBAL, MO.

The symptoms of acute tubal inflammation vary according to its cause. In chronic cases the symptoms are practically the same regardless of cause. In acute septic cases the inflammation is more extensive, the number of the organs involved is greater, and the general systemic intoxication is much more severe than in those of gonorrheal origin. The ultimate damaging effect of each are about the same, and though there is the possibility of a partial or even in some cases a complete resolution in those of septic origin, this is never true where there is gonorrheal infection.

Tubal and pelvic inflammation from gonorrhea can hardly be called acute. It is practically chronic in its symptoms and course from the beginning, and its treatment is that for chronic inflammations in this locality, depending upon the extent of the destructive effects of the disease.

Acute septic infection of the internal genitalia of the female calls for measures to diminish its intensity, limit its spread, promote resolution and to evacuate pus collections where it can be done with safety. After a variable period the symptoms resulting from the acute infection subside, terminating in some instances in resolution, more often however in a chronic condition in which the patient suffers constant discomfort and from slight causes frequently recurring attacks of pelvic peritonitis, accompanied by symptoms of septic absorption chills, fever, pain and sweats. When this condition has been reached the symptoms are the same for both septic and gonorrheal causes, and the indications for the treatment are likewise the same.

In inflammatory conditions of the adnexa, where the progress of the disease has stopped short of pus formation, such as parametritis, pelvic peritonitis with exudation and adhesions, etc., the tendency is to use conservative rather than medical treatment. It is in this class of cases that conservative treatment (such as superheated air, electric light baths, hot vaginal douches, ichthyolglycerine tampons, pelvic massage, the mercury colpeurynter, etc.) is indicated and is often carried out with brilliant results. I have seen acute pelvic inflammatory exudates melt away with surprising rapidity as a result of the use of the electric light bath or of the superheated air in the Schauta Gynecological Clinic in Vienna and in the Polyklinik in the same city. In cases of longer duration where the exudate has become more or less organized the use of the mercury colpeurynter and of pelvic massage are very beneficial. While an assistant in the Gynekologische Abtheilung of the Polyklinik in Vienna I have seen many excellent results from these measures also.

Whenever pus is present it must be evacuated and in the presence of pus such conservative measures are not only useless but often harmful. After the removal of the pus such efforts are often advantageous in promoting resolution. Prochownick, in a recent article (Monatsschrift fur Geburtshilfe und Gynekologie, XXIX, No. 4, 1909) analyzes the results of conservative treatment of inflammatory conditions of the uterine adnexa in 160 cases. Of these 48 showed no improvement but were made worse by the treatment and surgical intervention was required. It is his opinion that when the first course of conservative treatment shows no marked improvement, the second and third attempts merely postpone the inevitable operation and renders the condition less favorable for it. He emphasizes the importance of recognizing early the cases that are not suitable for conservative measures in order that surgical treatment can be promptly applied. In suppurative conditions of the female pelvis, as in appendicular inflammation it is better to await a subsidence of the acute condition and operates in the interim unless there are symptoms demanding urgent intervention when prompt operation becomes necessary as a life-saving measure. In such instances the surgeon must decide whether the opening of the cul-de-sac of Douglas through the posterior vaginal vault and instituting drainage will be sufficient, or whether it will be necessary to do a radical operation through the abdomen with a vaginal drainage.

In the last meeting of the American Gynecological Society, Boldt, of New York (Jour. Amer. Med. Ass'n, Vol. LII, No. 20) stated, that from his personal experience, it is dangerous to operate during acute

*Read at the meeting of the North Missouri Medical Association at Moberly, Mo., June 17th, 1909.

suppurative salpingitis, as in 99 cases out of 100 it is possible to wait until the acuteness of the attack has subsided, depending however upon the condition of the patient. He says that in most instances in women with gonorrheal infection the regaining of the normal functions of the organs of the pelvis is not to be expected.

Bovee, of Washington, D. C. (idem) believes that such appendages rarely get into a condition for functionating and that where a previous vaginal incision has been made for the evacuation of pus and drainage, the adnexa will subsequently require removal and with them the uterus in some cases.

Patients with pelvic pus collections that have endured for some time and show no tendency to resolution, but rather light up a new inflammation upon slight or unusual exertion can only be cured by a radical surgical operation. The existence of such abscesses cause the woman to be a chronic invalid and are a source of constant danger from rupture and resulting general septic peritonitis. It is such a case that I beg to report as follows:

Mrs. C. S., age 23, married, has had two confinements. The first was without incident. The second occurred eight months ago, at which time the patient suffered from puerperal sepsis and was confined to her bed for a period of seven weeks. Since the last confinement she has suffered repeated attacks of inflammation of the lower abdominal and pelvic regions, during which she is compelled to remain in bed from one to two weeks at a time. Between these attacks she is unable to do her housework or to use her sewing-machine. The patient was referred to me by Drs. Moss and Ragsdale of Paris, Mo.

When brought to hospital she had a temperature of 103 F. and was too sensitive and tender over the lower abdomen to be examined. Later when examined, the womb was found to be enlarged, somewhat anteflexed and with a right unilateral laceration of the cervix. In the left side of the pelvic cavity and partially filling the posterior cul-de-sac was a tumor mass the size of a large orange, apparently either a pelvic abscess or a largely distended tube. The parametrium was hard and thick. On the right side was felt an enlarged trumpet-shaped mass greatest near the pelvic wall, and which was thought to be a tubal abscess with possibly an enlarged ovary. The appendix was not palpable on abdominal examination.

With rest and appropriate treatment the temperature having subsided to nearly normal she was prepared for operation, and on the fourth day after entering hospital I curetted the womb and repaired the cervical laceration, and then opened the abdomen. The left side of pelvic cavity was entirely filled with a tumor mass covered up with inflammatory adhesions. The right tube was found enlarged and containing a pus sac at its outer end the size of a hulled walnut. The fimbriated end of the right tube was spread out over the ovary and bound to it by inflammatory adhesions. The ovary was enlarged and thickened from inflammatory exudate and contained a small abscess and many cysts. Realizing that I had pus to deal with I decided to inspect the appendix and to remove it if it showed evidence of disease. It was found with the tip hanging over the brim of the pelvis, attached by adhesions to the right tube and inflamed for some distance from its distal extremity, the inflammation evidently extending from the tube. The appendix was first removed and then the right tube and ovary.

In breaking up the adhesions on the left side in order to liberate the left tube and ovary a large abscess cavity was opened, and from six to eight ounces of pus welled up into the field of operation. This was carefully wiped out and the abscess cavity further explored for pockets. Two smaller abscess cavities were thus opened up and their contents wiped out. The left tube was then freed and brought into view. It was found to be much thickened, to contain pus and was ligated and removed. The left ovary being covered with inflammatory exudate was freed and was left for cosmetic reasons to avoid the symptoms of an artificial menopause, and as the patient's pulse was showing the effects of the length of time under anesthesia it was deemed advisable to terminate the operation without unnecessary delay.

The free oozing that had resulted from the separation of the adhesions was quickly checked with tampons wrung out of hot salt solution and having assured myself that the field of operation was dry and clean the abdomen was quickly closed with layer sutures of buried cat-gut without drainage and the patient put to bed. The convalescence was uneventful. The patient reacted well and had no shock which was remarkable considering the length of time under anesthesia, the number of operations performed (curettage, trachelorraphy, appendectomy, double salpingectomy, freeing adhesions, etc.), and the amount of handling of the abdominal and pelvic viscera incident thereto.

The post-operative temperature at no time exceeded 100 degrees F. The bowels moved spontaneously on the second day and continued to do so as long as she was in the hospital. Previous to the operation she had suffered from constipation. She had a most excellent union of the abdominal wound. On the tenth day she was allowed to leave her bed, and on the fifteenth day after operation she returned to her home. She is now attending to all her usual household duties, and says that she is enjoying as good health as ever before in her life.

My microscopical examinations of the appendix reveal round cell infiltration of all its structures, but most intense in the outer coats, showing that the inflammation extended from without inwards and proving that the infection came from the fallopian tube, and that it did not originate in the appendix itself. Microscopic section of the right ovary revealed an increase of the fibrous tissue stroma extending through both the cortical and the medullary portions and surrounding many degenerated Graafian follicles. Where the infundibulum of the right tube was attached to the ovary there was an abscess cavity 1½ cm. by 2 cm. in size resulting from an extension of the inflamamtion from the right tube.

Both Fallopian tubes showed a hyperplasia of connective tissue elements, a marked round cell infiltration of all their structures (muscular, mucous and peritoneal) and covered with a thick exudate of organized peritoneal lymph. Where the mucous coat persisted it was swollen and edematous, with round cell infiltration, etc. Both tubes contained abscess cavities, each near its outer extremity. That of the right was 2½ cm. by 5 cm., while that of the left was 1½ by 3½ cm. The abscess walls consisted only of part of the muscular layer and the peritoneal exudate covering it.

Whether to take out or to leave the appendix at the time of the removal of the uterine appendages is a question that confronts the surgeon when operating through the abdomen. Whenever the abdomen is opened the appendix should be inspected, and if it shows evidences of disease the indication is clear. Should it be seemingly healthy, and one is dealing with a pus collection it then becomes an important question to decide whether or not it will greatly prejudice the patient's chances for recovery to remove it, thereby adding additional time to the operation, with possibly deeper shock and greater risk of infection. Personally I believe that the appendix should be removed in all cases whether diseased or not, and that as soon as the abdomen is opened if it is possible to do so. It is a simple procedure, quickly performed and with a buried stump, the added shock and danger of infection is small.

Pankow (Beitrage zur Geburtshilfe and Gynekologie, Vol. XIII No. 1). examined 150 appendices removed in the course of gynecological operations in Kronig's Clinic in Frieburg and found that more than 75 per cent of them showed signs of past or present inflammation. He is of the opinion that there is a close association between appendicular inflammations and female genital diseases. He urges the removal of the appendix as a routine practice when macroscopically sound whenever the female abdomen is opened for any purpose. He cites a number of cases occurring in Kronig's clinic in which the inflammation spread from the uterine appendages and vice versa.

The question of drainage in these cases is one that the surgeon must decide before closing the abdomen. The drainage material of whatever nature is a foreign body, and as such is tolerated no better than other foreign bodies in the abdomen. At all times it causes a certain amount of irritation and injury and it should be used only when the good that it accomplishes more than counterbalances the bad effects to which its presence gives rise.

In acute cases where the inflammation is active drainage is necessary to assist in carrying off the inflammatory products, bacteria and toxins. In active pus collections of somewhat long duration are generally sterile, and when the greater part has been removed, the small amount remaining has little if any thermogenic or toxic property. Following the practice of Burger, in the Schauta Clinic in Vienna, after simply wiping out the pus from the ruptured pelvic abscesses I closed the abdomen in this case without drainage, although there were large raw surfaces remaining from the separation of the adhesions that were bathed with the abscess contents. The absence of fever and shock, and the excellent condition of the pulse during the entire convalescence showed the wisdom of this procedure.

The question of the removal of both ovaries with the diseased tubes even when the ovaries themselves show evidence of disease is a matter not to be lightly dismissed in the case of a young woman. Artificial menopause is a condition to be avoided, if possible, both because of the psychical as well as the physical symtoms to which it

gives rise. In this patient the uterus and one ovary was left. She had not menstruated regularly since the birth of her last baby eight months ago, but since the operation, in March, she has menstruated regularly with a flow of an average amount. She has no symptoms as yet of an approaching menopause. Undoubtedly sufficient ovarian tissue remains to supply the nervous equilibrium.

Peterson (American Jour. Obstet., Vol. LIX, No. 5) who has analyzed the results from 175 cases of hysterectomy in which both ovaries were removed in 146, and where all but a part of one ovary, or one ovary only, or neither ovary were removed in 27, makes the statement that at least 10 per cent of all women regularly menstruating at the time of operation will be free from the symptoms of artificial menopause after hysterectomy with removal of the ovaries, and that the percentage of women with no symptoms after similar operations will be no more than doubled if some ovarian tissue is retained. He says that it is not necessarily true that the younger the woman the greater the symptoms of the menopause, but that the greatest percentage of suffering occurs in women operated upon between the ages of 40 and 44. He concludes (axiomatically) that the greater the amount of ovarian tissue left (not removed), the loss will be the symptoms of the artificial menopause—a statement that will not admit of argument provided that the ovarian tissue is healthy.

At the last meeting of the American Gynecological Society, Professor Hofmeier of the University of Wurzburg, Germany, stated (Jour. A. M. A., Vol. LII, No. 20) that if on thorough macroscopic examination the second ovary seems to be healthy, may be left, as the removal of both ovaries is detrimental to the general health of the young woman. If both ovaries are diseased they must be completely removed with the uterus.

In my opinion, if after having removed one ovary, the other is found to be only moderately diseased, it may, after freeing the adhesions, be left to prevent the distressing symptoms of an artificial menopause. Such an ovary will often undergo restitutio ad intergum to a considerable extent, and the patient will be left in a more comfortable condition than if it had been removed.

Syphilis simulates nearly every other surgical disease, and the most virtuous are subject to its ravages.—Amer. Jour. of Surg.

UNIVERSITY HONORS FOR BYRON ROBINSON.

Well merited distinction was accorded a Chicago scientist when the University of Valparaiso conferred the honorary degree of LL.D. upon Dr. Byron Robinson, May 18th. The ceremony took place at the commencement exercises of the medical school in the University Auditorium, Valparaiso, Ind., and at the same time a bust of Dr. Robinson was unveiled and presented to the University. The unveiling address was

delivered by Dr. T. G. Atkinson, of Chicago, editor of the Medical Standard, who spoke as follows:

"I stand here tonight, not altogether in my own right. This place and occasion logically belong to another—to the man whose quick brain and warm heart conceived this honorable project, whose executive genius planned and carried it forward, and whose loyal persistence has brought it to this successful completion. That man is Dr. Benjamin H. Orndorff of Chicago; and it is to him that this hour, with its message of consummated purpose, rightfully belongs. But in the goodness of his heart he has given way to me,

so that I might have the double privilege of holding up to your honor and gratitude two of my good friends—the man whose lineaments, done in imperishable bronze, I unveil to you to-night, and the man whose mind and heart gave birth and maturity to the design.

"When I shall disclose to you this bust, it will be seen that it is in every way worthy of its subject, and the art of the sculptor has succeeded in expressing in a peculiarly adequate fashion, all of those qualities that go to make up the strong personality of the man and the character of his greatness. It is the work of Miss Mary Washburn, of Chicago, to whom our thanks are due for the large grasp she has displayed of the subject of her art.

"It will be seen that the front view of the bust gives the impression of the alert man of science in a moment of animated discussion, while the profile reveals a wonderful strength of purpose. And no description could better fit the character of the man it represents.

"Byron Robinson is a unique character, as all great men are. Every great man stands, more or less, upon a solitary peak. The dominant notes in his personality are a keen imaginative vision that can sweep horizons, and an irrepressible cyclonic energy that can beat its way through a thousand tangled mazes to reach them. He has a supreme disregard for all the petty conventionalities of life, but all the time in the world for the kind of detail that counts. These are the qualities that make him great. He has human qualities that make him beloved and revered by those who know and understand him to the extent of perpetuating his memory in this signal fashion.

"He is, as the bust faithfully portrays him, an alert and skillful man of science. He has a message to deliver, and knows how to deliver it. Something more than the bare facts of science, which of themselves do not constitute truth. Not but what he has the facts and has them right—has them at first hand. But he is, above all else, a scientist and a philosopher; he beats the facts on the anvil of philosophy and forges them into living principles.

"If I should attempt to sum up his influence upon medical science in a single sentence, I should say that it lies in the broad scientific basis on which he has foundationed its empirical truths.

"Slowly—more slowly, we are sometimes tempted to think, that any other department of knowledge—medical science is moving toward the goal that every science must ultimately reach—the assembling of its phenomena under one unifying law of causation and effect. It is to this great central progress of medicine and surgery that Byron Robinson has contributed a part such as only the insight and imaginative faculty of genius could achieve.

"To be great is to be misunderstood. The recognition of Byron Robinson's great service to medical science has been rather slow in coming. In the course of a fearless and uncompromising crusade against established error in high places, he has naturally made many critics, and even enemies. It is at once Robinson's temporal undoing and his abiding crown of usefulness that he does not deal in concrete things at all except as bases for philosophic principles; and medical science, in common with the rest of the world, does not take kindly to its philosophers until their philosophy has become a concrete part of the rest of its knowledge. But among right-thinking men this man, who has fought so long, single-handed, a battle against irrational surgery, backing up every inch of his way with the unanswerable logic of his scalpel and his pen, is at last coming into his own, and the principles for which he has stood are surely and triumphantly winning out.

"His contributions to anatomy are many and important, and have become an integral part of medical science. His teachings and work in abdominal surgery have changed the entire face of that subject. His influence has not yet reached its fullness—it has only just begun. He is essentially a man of the future—a prophetic spirit ahead of his time. As Nicholas Senn well said of him,

The impression conveyed by Byron Robinson's works is that they will yield more and more material the more carefully they are studied in succeeding decades."

"It is significant that the recognition and expresson of his premanence, represented by this bust, should be the tribute of those who are most susceptible to the whisperings of the future—the rising generation. One of his own favorite aphorisms is that the optimist worships the rising, the pessimist the setting sun.' He is himself the best exemplication of his own figure—the rising sun. Like all really great men, he is at heart a drinker at the fountain of perpetual youth.

"This university honors itself in honoring Bryon Robinson. Paraphrasing the words of the immortal Lincoln, 'the world will little note nor long remember what we say here; but it cannot forget what Byron Robinson did here.'

"In behalf of the presentation committee,

and as a perpetual memorial and inspiration to future generations of students, I now turn over to the Univeristy of Valparaiso, in trust for the wrold, the bust of Bryon Robinson, thinker, investigator, surgeon, scientist, man, whose bust I have the honor to unveil."

Russia leather is the skin of the horse or calf tanned with the bark of the birch, which gives it that pecuilar smell which is so grateful to the senses, and seems to preserve it from the attacks of insects.

Not in several years has the City of Mexico been more free from contagious diseases than at the present time. Only one case of scarlet fever has been reported in four months and the city seems to be absolutely free from smallpox. A few cases of typhus fever have been reported within the last month, but the number has been smaller than any time in years.

On April 26, the Boisliniere Memorial Fund was transferred by the St. Louis Obstetrical and Gynecological Society to the St. Louis Medical Library Association, with the understanding that the fund was to be safely invested and the proceeds expended for the purchase of books and journals treating of obstetrics and gynecology. These, with all literature on these subjects which the Library Association now owns or may later acquire, are to constitute the Boisliniere Memorial Collection of the Library of the Medical School. The fund was created by the physicians of this city as a memorial to Dr. Louis Charles Boisliniere, Professor of Obstetrics in the Medical School of the University, who died January 13, 1896.

The Younger Men in Medicine.—We read with interest that at thirty-two, Dr. Henry Asbury Christian has been appointed Dean of the Harvard Medical School; nor is this an unusual distinction for this period of life. For others of Dr. Christian's associates, and whose years are as his, hold, also, places of great responsibility and honor; among whom are: Dr. Timothy Leary, Professor of Pathology at Tufts Medical School; Dr. W. P. Brinkerhoff, Director of the Leprosy Hospital at Honolulu; Dr. R. L. Thompson, Professor of Pathology at St. Louis; Dr. E. E. Southard, of the Harvard Medical School; and Dr. R. M. Pearce, Professor of Pathology in the University-Bellevue Medical College.—Indianapolis Med. Jour.

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EDITORIAL

Something Further on the A. M. A. Meeting.

It has taken some little time for reports to reach the great mass of the A. M. A., who were not able to be at the recent meeting, on which we can form a definite conclusion as to the real work accomplished by the association at this meeting. The reports first coming led us to conclude that it was something of a love feast, characterized by nothing but harmony and enthusiasm for things as they are; it later develops that while the machine was well greased and accomplished what it purposed there was nevertheless evidence of something wrong in the gearing which is causing some apprehension in high places. The best report which we have seen of this meeting other than those which appear in official, and therefore prejudiced organs, was pubished by the editor of the Lancet-Clinic in his issue of June 26. This report comes from so conservative and unprejudiced an observer and is so full of vitally interesting points that we feel that no further explanation is necessary for where reproducing it in toto. Dr. Kreidler tells us that "the presidential address bristled with important recommendations. The president was right, of course, in saying that, too frequently in the past well-defined policies have been presented by committees as if they were approved by the entire association; such policies should be presented, before they are published, to the board of trustees for approval. The committee on Medical Legislation and the council on Pharmacy and Chemistry have been the greatest sinners in this respect. They took for granted the sanction of the membership for their actions, thus arbitrarily setting a standard before the world to which they were not entitled. The policies of all com-

mittees should, indeed, be submitted to the board of trustees for approval, and this board should be held strictly accountable to the association.

"The recommendation of the president to separate the offices of editor, general manager and secretary was commendable. It is in the nature of man to abuse power if invested with it to an extent beyond his judgment. The despots of old and the autocrat of today, no matter how enlightened, are the same in spirit. No man is so great that he can wield satisfactorily unlimited power. The combination of three important offices in one person may lead to abuses which may jeopardize the

WILLIAM H WELCH, M. D.
President-elect American Medical Association.

very existence of the American Medical Association. Dr. Simmons, whether justly or unjustly, has been made the subject of severe criticism in the past, which, if continued, may do irreparable injury to the cause of medical organization and to the science of medicine as well. The offices should be separated at all hazards.

"The association journals, nineteen in number, to which reference was made in the report of the General Secretary, although usually colorless, and in the very nature of things circumscribed in their activities, are nevertheless of great benefit to medicine. They are a necessity for the dissemination of official news and for discussion of important business. The papers printed, if unusually meritorious, are frequently copied by independent journals, thus giving them a wider circle of readers. The membership of the association, the General Secretary shows has increased 424 per cent, surely an admirable record. In 1899 there were 7,997 members; in May, 1909, 33,935.

"The report of the board of trustees is disappointing, because of the evident desire of its members to sanction acts contrary to the wishes of many members of the association, for the sake of harmony. A closer scrutiny of the committees and individuals under direct control of the board might have suggested some things not entirely above criticism. When, for instance, the board of trustees says, 'We feel that Dr. McCormack has been an educator of the profession, of legislators, and of the people, and a peacemaker to all,' it says something really funny, although we can well forgive the board for injecting a little humor into its otherwise dry report. Dr. J. N. McCormack has cost the association last year $7,310.05 for salary and expenses, and in return it has seen increased the previously large amount of bitterness, resentment, dissension, which the gentleman from Kentucky has so injudiciously, and with such entire absence of tact, succeeded in planting everywhere. The board of trustees knows better, but wanted to inject a little levity in its report, which the membership no doubt appreciates.

"The board of trustees in 1907 authorized the publication of the Archives of Internal Medicine, an innovation which was somewhat radical, in that the association was not even consulted. It is evidently intended to receive the most ultra-ultra scientific papers which are contributed to the Journal of the American Medical Association. As such the Archives of Internal Medicine seems to be a success. However, many are dubious about the statement that it is self-supporting.

"The report of the Committee on Medical Legislation was especially interesting, in view of the fact that there has been much discussion of a national bureau of public health. It is to be hoped the promised support of President Taft will be forthcoming. The part of the report devoted to the proposed medical reserve corps for the United States navy, however, will not meet with much approval. The profession and the laity have not taken very seriously the highly ornamental reserve medical corps for the army. The reason is obvious. Much State legislation of an important kind has been accomplished by the committee. Undesirable bills have generally been pigeon-holed or killed outright through its efforts, and remedial legislation enacted.

"The report of the Council on Medical

Education is made up principally of the work done to elevate standards and to secure acceptable conditions in medical education. That its work has been beneficial is admitted by all, although some of its acts were at times arbitrary. American medical schools have been until recently a source of amusement to European scientists. Derision is being changed into respect.

"The report of the Committee on the Scientific Exhibit was illuminating and especially commendable.

"The Reference Committee on Reports and Officers sanctioned the recommendations of the president in his annual address. It, however, recommended that since the board of trustees has the authority to consider and act on the advisability of having different individual selected to the offices of editor and general manager, the delegates take no cognizance of the recommendation. In which the house of delegates obediently concurred.

"A more definite discussion of the proceedings need not be made at this time and place. However, one cannot refrain from making a comparison between the attendance at Chicago last year, with its nearly 8,000 registrations, and the paltry 2,300 at the 1909 meeting. Is there a lack of interest? Are the members dissatisfied with the management? The year 1908 was a year of reduced incomes, and yet there was a greater attendance by nearly 5,400 at the annual meeting. The membership must show a greater interest. Otherwise the prediction is freely made that the great Mississippi Valley Medical Association will absorb the energies and the attention of the physicians in this immense region, sadly crippling the American Medical Association. It is to be hoped, however, that every member, and especially the officers, will labor incessantly to enlarge the usefulness and the prestige of this the greatest medical association in the world. The progress of humanity as well as of science would be seriously hampered by an impairment of the association's usefulness."

ST. LOUIS ITEMS.

The St. Louis Baptist Hospital is being materially enlarged by the construction of a new wing along the north side of the grounds, which is of modern construction in its every detail and will more than double the present capacity of the institution. Eventually the old building will be replaced by a new main building harmonious in construction with the building now being erected.

Death of Dr. Justin Steer.—That Dr. Justin Steer should have died from poison self-administered has added not a little to the profound sorrow which his death occasioned the profession, his very large clientele and his many friends here in St. Louis and elsewhere. The reasons which led to the act were so out of harmony with his otherwise excellent judgment, though an absolute authority in matters of obscure diagnosis he harbored an entirely mistaken notion of his own condition, and believing himself the victim of both aneurism and cancer he ended his misery. Dr. Steer lived a life of wonderful achievement; the pity is that he could not have been convinced that it should have continued for many years.

Retirement of Dr. W. B. Outten.—After a service of thirty-four years as surgeon-in-chief to the Missouri Pacific-Iron Mountain system Dr. W. B. Outten resigned on July 1st, assuming at the same time the position of consulting surgeon to the company. Dr. Outten has during his whole life played an important part in the development of things medical and otherwise in the middle West; we could wish him many honors in addition to the many which he has already achieved. We are certain that this partial retirement will mean greater activities in lines of his especial bent; that his is to be both an active and a serene old age goes without saying. Dr. Paul Vasterling, who has been for a long time his assistant, is now surgeon-in-chief of the system.

The St. Louis Profession is beginning to realize that it is facing busy times, the St. Louis Centennial and the meeting of the Mississippi Valley Association, in both of which we are interested, come in October next. It is belived that the meeting of the M. V. M. A. will attract the largest attendance that that society has ever known; preparations are being made with that expectation. It is expected also that a considerable number of our medical friends will attend the Centennial celebration, which occurs the week before the Association meeting. St. Louis will be ready to welcome all comers, and the St. Louis profession will see that physicians are profitably and enjoyably occupied while within our gates.

According to report of Surgeon-General Wyman, San Francisco is now free from plague. There is no evidence of the disease either in humans or rodents.

THE REVIEWER'S TABLE

Books, Reprints, and Instruments for this department, should be sent to the Managing Editor, Century Building, St. Louis.

THORNTON'S POCKET MEDICAL FORMULARY. New (9th) edition. Containing about 2,000 prescriptions, with indications for their use. In one leather-bound volume. Philadelphia and New York: Lea & Febiger, Publishers, 1909. (Price, $1.50 net.)

It would be difficult to mention a more useful work than Thornton's Formulary. The author is peculiarly qualified to render such a service, as he unites in himself a knowledge of the three necessary branches, being a graduate in pharmacy, a professor of materia medica in a leading medical college, and an active practitioner of many years' standing. He has here presented the collective experience of the medical professions as to the best measures for combating each disease. He has arranged the various diseases alphabetically, and under each has given the best formulae for simple cases, as well as for the various stages and complications, with quantities both in the ordinary and metric systems. A feature peculiar to this work, and one of obvious value, is found in the Indications and annotations for a choice between the various formulae according to the conditions to be met. Critical study has been given to each formula in all its parts, as well as to palatability and compatibility. No point desirable in such a work has been overlooked. The most experienced physician will find it useful as a reminder, and his younger confrere will perform his duty better both to his patient and himself with the best collective knowledge of his profession at hand for quick reference. That practitioners widely appreciate its value is shown by the frequent demand for new editions, a point of special importance in a work dealing with so rapidly advancing a department as therapy. In each of its nine editions, the author has embodied the latest and best information, so that the profession may consult this hand-book with confidence in finding it always up to date.

Social Service Societies.—Dr. Richard C. Cabot, Boston, in addressing 200 ladies in Philadelphia, May 11, on Social Service said: "Many patients discharged from the dispensaries as cured still require a brace, an artificial arm or a change of work or air, but these dispensaries can not supply. This is one of the gaps which the social service worker can successfully fill. The dispensaries supply the prescription, and the social service worker sees that the prescription is filled."

MEDICAL PROGRESS

Comprising the Regular Contributions of the Fortnightly Department Staff.

OTOLOGY.

A. F. KOETTER, M. D.

The Question as to the Origin of Subjective Noises in the Ear.—(Werhovsky, Zeitschrift fuer Ohrenheilkunde.)—The most frequent and tormenting symptom in diseases of the ear is the subjective noise. The variety is very large. As to its nature our knowledge is limited. A large percentage of the subjective noises arise according to our present theories from direct irritation of the auditory nerve at some point in its course, and not as the result of an acoustic irritation of the sound perceiving mechanism in the ordinary manner.

That through direct irritation of the acoustic in sudden sound impressions, noises may be caused in the ear is possible; but this origin cannot be accepted for the constant whistling and humming that exists for years. To consider here an external or internal irritation is impossible, unless it existed uninterrupted and in the same degree for years. As a further cause for subjective noises the increased laybrinthian pressure may be considered. But the latter, according to Bezold, will soon be equalized. Continuous intracranial pressure cannot always be considered. Other causes, which may be considered with better reason, are contraction of the muscle tissue. Characteristic of this is the deep sound heard, assuming rather the character of a noise than a tone, and being of short duration. The passing of the respiration through the upper air passages may in rare cases cause subjective noises. The main, and for many cases the only, reason is the noise in the blood vessels. The peculiar relation of the vascular network on the promontorium (Brunner and Prussak), furnish the explanation. Author believes that we should be surprised that the vascular murmurs are not a normal condition. At all events a marked change in the vascular system is not absolutely necessary to create subjective noises. Author mentions the views of the different writers who explain all subjective ear noises as vascular murmurs. He believes that the idea that all ear noises originate in the vessels will soon find general recognition. Whether we are dealing with a contraction of the labyrinthian vessels (Theobald), or a vasodilatory process has not been decided. Physiological vascular murmurs may be heard without disturbance of the normal

condition of the circulation, which before that had not been heard by the patient, as soon as the osteo-tympanale conduction has been increased, or the resonance conditions in the ear have been changed. Furthermore, the sensitiveness of the nervous system for the perception of physiological or pathological vascular murmurs is of great influence.

The Ear Symptoms in the Diseases of the Vascular System.—L. F. Bishop, New York, I. A. White Richmond, C. F. Welty, San Francisco, Jour. A. M. A.)—Bishop arrives at the following conclusions: 1. In many cases ear noises are simply a local manifestation of a general circulatory disturbance. 2. It may have its basis in an arter-io sclerosis, but the disturbance in the circulatory system is often a functional one. 3. They may be found together with increased blood pressure and also with diminished blood pressure. 4. The blood pressure should be tested by the otologist, it can be accomplished according to the simple method of the essayist, in a few moments. White in the last two weeks has measured the blood pressure in twenty cases of tinnitis aurium, In five cases the pressure was diminished (100, 103, 105, 108, 110), in only two cases was the noise synchronous with the pulse, of the other cases one had a tension of 121, the others from 140 to 200. Of the latter casesnone were afflicted with disease of the kidney or of the heart, except a slight hypertrophy. The five patients with diminished tension were all below 35 years of age, apparently healthy but neurotic. Welty does not believe that the blood pressure plays a marked influence in the origin of the ear noises. Arteriosclerosis with high blood pressure often causes no tinnitis, but on the other hand, causes labyrinthian deafness through disease of the arteries.

The Use of Bismuth Paste in Suppurations of the Ear, Nose and Throat.—J. C. Beck, Chicago (Jour. A. M. A.) uses the paste in two forms:

1.	Bismuth subnitric	30.0
	Vaseline	60.0
	White wax	5.0
	Paraffin (120 F.)	5.0
2.	Bismuth subnitric	30.0
	Vaseline	50.0
	Paraffin	10.0
	White wax	10.0

The second form is used in filling out defects following simple mastoid operation, otherwise the first formula, in furunculosis, eczema of the external canal, chronic middle suppuration (injection of the paste from external canal or per tubam), suppuration after radical operation, scale formation. After simple mastoid operation defect is filled out with paste and primary suture made. After radical operation it is used in place of a tamponade. Counterindication in chronic suppuration is a small perforation or a labyrinthian fistula. In filling out cavity following operation pressing the gauze prevents the flow of the paste under the skin. The epidermization occurs rapidly in using the paste.

A Case of Primary Tuberculom of the Septum.—(Dupond, Archives intern. de Laryngologie, etc.)—In an otherwise healthy patient, of 60, a pedunculated tumor was found on the right side and anterior inferior part of the septum. The growth was exceedingly slow. It was removed with a cold snare and the granulating surface cauterized later. The diagnosis of tuberculosis was verified microscopically. Of value for the origin of the growth, was the fact that the patient had the habit of scratching in the nose with her figers, and furthermore, the nasal mucous membrane showed the picture of an atrophic rhinitis.

Treatment of Otosclerosis with the Faradic Current.—(Zitowitsch, St. Petersburg, Monatsschrift fuer Ohrenheilkunde.)—In an interesting and exhaustive compilation author gives the different views as to the nature and the etiology of otosclerosis, which he himself considers a disease of the inner muscles of the ear. Finding the cause in this, he directs his treatment towards the weakness and atrophy of these muscles, the stapedius and the tensor tympani, using the electro-massage. He reports twenty cases treated in this manner and noticed a decided improvement in the function of the stapedius as well as in the tensor tympani, causing a diminution disappearance of the tinnitus aurium, as well as an improvement in the hearing. He reaches the following conclusions, based on his experience: 1. In all persons afflicted with otosclerosis the function of the tensor tympani is impaired or lost entirely; very rarely is it retained, and in this case we must therefore consider an isolated primary affection of the stapedius muscle. 2. Ear noises, under the influence of faradization, disappear entirely or diminish to such a degree that they do not annoy the patient. 3. By this method of treatment the hearing distance is increased, due to the improvement in the capacity of accommodation. 4. In faradization one electrode is introduced into the opening of the Eustachian tube and the button of the electrode pressed against the

superior wall. The second electrode is placed on the angle between the lower jaw and the mastoid process. 5. The intensity of the current varies in different individuals. As a rule the strongest current that the patient can stand should be used. 6. The duration of the sitting should be three to five minutes, the freuqency of the sittings not less than three times a week.

Aggravation as to the Point of Indication in Operation on the Ear.—Hasslauer, Munich (Zeitscrhift fuer aertzliche Fortbildung) emphasizes the frequency and virulence of acute middle ear inflammations which occurred in his practice. The aspect of the disease was often disguised by a simultaneous influenza, pneumonia, pleuritis and even meninigtis, so that the point of operative interference was difficult to detect. 1. Otitis media dext. Paracentesis, drop in temperature; fourth day sinusitis max. sin., temp. 39.0 deg., improvement. Eighth day 403. deg., mild otitis left, pneumonia. After three days severe otitis media left, mastoiditis paracentesis without effect (influenza). Stupor, operation, mastoid process opened to the middle cranial fossa, antrum and tip free, recovery. 2. For eight days slight discharge from right ear, temp. 40 deg., double croupous pneumonia, glands of neck enlarged. Increased discharge mastoid proc. clear, pleuritic exudate on right side Tenth day pain on swallowing, bulging of pharyngeal wall, incision one pint of pus. Seventeenth day no fever, swelling over mastoid process, operation, mastoid process removed entirely, broken through at several points; recovery (Bezold's Mastoiditis). 3 Otitis media dextra, paracentesis. Third day temp. 4 deg., chills, operation; extended suppuration, sinus clear. Chills, vomiting, cord-like jugular, ligation, lumen free. Metastases in right ankle and spleen. Radical operation, blood sterile. Later metastases in lung and heart, on eighteenth day in right shoulder joint, two days later meningitis, opening of the middle cranial fossa and the right shoulder joint with partial resection. Deplorable condition. After six months recovery. 4. Fall from wagon, cerebral concussion, rupture of left membrana tympania. Ninth day temp. 39.2 deg., posterior wall and mastoid process edematous and swollen. Operation: subperiosteal abscess, tear 1 cm. deep in the posterior canal wall and obliquely through the mastoid process to the occiput. Superior part of mastoid process suppurated. Recovery with normal hearing. 5. For three years right sided suppuration. Polyp, 15. cm. long, springing from superior portion through tympanic membrane (histological examination shows lupus-carcinoma), behind which there is a cholesteatomatous mass. Radical operation: black crumbling mass in the mastoid cells, granulations in the tympanic cavity, tegmen tympani brownish mass; recovery. After five months no return. Author reports several other cases of suppurating ears with complications which were operated on with good results.

SURGERY.

C. W. HEPBURN, M. D.

The Surgical Treatment of Malignant Goitre.—Dr. Edward Martin writes, in Therapeutic Gazette for December 15, 1908, that the radical cure of malignant goitre is almost entirely dependent upon timely diagnosis. Such a diagnosis can never be absolutely assured. It is based on probability and not certainty; hence, surgical intervention dependent on such probable diagnosis will at times be practiced upon thyroids which subsequent microscopic examination will show are subject to benign enlargement. This, however, is not to be regretted, as the operation is a comparatively simple and safe one, with a mortality so low as to render its justification absolute, and at the worst it has removed a pathological organ having a detrimental effect upon the general health and particularly subject to malignant invasion. In its complete development the diagnosis is obvious and unmistakable and also futile. When infiltration has not extended beyond the capsule, the tumor is still movable, the lymphatics are not palpably enlarged, and there are no metastases, operation still gives a fair promise of radical cure even though pressure symptoms are well developed. A good prognosis is, however, justified only when the gland or its affected portion is entirely removed before the diagnosis of malignancy can be formulated. When metastasis has developed, if the thyroid infiltration be still intrascapsular, removal of the gland, together with its metastatic focus, is advisable. With involvement of the trachea or esophagus, or both, and infiltration of the perithyroid tissues, radical cure becomes at best a remote possibility, though operation conducted in accordance with modern principles—i.e., complete extirpation regardless of structure—has occasionally been followed by success. Often these cases are not given surgical consideration till the infiltration has progressed so far as to render radical operation obviously impossible.

The Use of the Molded Plaster-of-Paris Splints in Fractures.—All fractures may be treated with molded plaster-of-paris splints, writes Dr. J. E. King, in Lancet-Clinic for May 15, 1909, and one should make one's own plaster bandages. The advantages of doing which is that they are made the desired width and have the proper amount of fresh plaster of paris in them, and are, therefore, more likely to set readily upon being wet. Ready-made plaster roller bandages are on sale, but these are usually made of unwashed crinolin and the plaster will not set quickly enough because of the sizing the crinolin contains. Crinolin is a material used by dressmakers for stiffening in dresses and for our purpose should be of the best and without bars. After washing out the sizing, dry press and cut into strips of the desired width and then roll. Three widths are ordinarily useful: 2, 3 and 5 inches. Make them four yards long. A shallow box or tin pan is needed to hold the plaster of paris, which should be of the best quality. It takes two persons to roll the bandage with facility, one to manage the roll of crinolin to keep it straight as it unwinds and spread the plaster on it, while the other draws it across the plaster in the box and rolls up the bandage loosely and evenly. It is important to put just enough plaster into the bandage and to distribute the plaster evenly through the meshes of the crinolin. It requires only five or ten minutes to prepare enough rollers to dress any fracture. If many bandages are made at once they may be kept in a tin box sealed up, with a strip of adhesive plaster put around the top after the lid is closed, and the box kept in a dry place.

Local Anesthesia in Major Surgery, with Especial Reference to Abdominal Work.—Dr. Winfield Scott Schley contributes a paper entitled as above to Medical Record for December 19, 1908. The conspicuous advantages of the local method are the greatly reduced or total absence of shock, absence of respiratory and gastric disturbance, and much more agreeable post-operative period. It finds its widest field and greatest usefulness in selected abdominal cases where general narcosis is contraindicated. The author's particular technic is neither the infiltration method of Schleich nor the neural method of Crile, Matas, or Cushing, but one of purely local anesthesia of the subcutaneous tissue and cellular planes with limited amounts of the solution of the anesthetic. A 4 or 2 per cent solution of novocain, to which has been added one-fifth or one-sixth the bulk of adrenalin (1-1000), is used to raise a continuous line of blebs along the line of the proposed incision. At intervals of one-third to one-half an inch along this line of injection a needle is introduced perpendicularly to the skin and to the depth of the tissue to be anesthetized, and five or six minims of the solution are injected each time as the needle is withdrawn. An ordinary aseptic hypodermic syringe is used. The maximum quantity injected has been 140 minims of the combination of 4 per cent novocain and adrenalin; 110 of the former and 30 of the latter. The operation may usually be started fifteen minutes after completing the injections, the effects of which will last, with 4 per cent novocain solution with adrenalin, for two hours, depending upon the vascularity of the parts injected, and be found deeper at the end of an hour than at the beginning and extending over a much greater area. The author describes the satisfactory results of the use of this method of anesthesia in two desperate cases of intestinal obstruction from enteroliths, in one traumatic rupture of the jejunum in a boy of thirteen years, in three operations for tuberculous peritonitis, in a complicated ovarian cyst, and in a recent case of acute pancreatitis.

Fractures of the Hip Joint.—In International Journal for March, 1909, Dr. Walter L. Hunt discusses intracapsular as distinguished from extracapsular fracture. The neck is apt to break at one of two places, either at its junction with the head of the bone, or at its base where it joins the trochanter. It is not necessary to differentiate carefully between fractures at these locations as both the neck and trochanter may be involved, and as the treatment is the same for all fractures of the femoral neck. This injury is not very frequent, constituting about one-sixth of all thigh fractures. It is more common in women and in the aged, and is noted for the trifling force required to produce it and the frequent failure of the bone to unite. As to the character of the union the author says: "I might consume your time in arguing whether this fracture unites by bone or by ligament. Years past the medical journals were full of reasons why it would or would not unite by bone, and the arguments still continue. If you will take my word for it, it unites by bone, irrespective of age or previous condition of servitude." The diagnosis is usually easy or rarely difficult, and for purposes of treatment it matters little if it is extra- or intracapsular. Age has a marked influence upon the prognosis; the older the patient the greater the probability of a fatal termination within a few weeks. If the third week passes without a change for the worse, the case usually

does well. The treatment consists of adjustment and retention of the fragments, after the method practiced and advocated by Dr. Maxwell.

Cancer of the Stomach.—Dr. J. C. Saxton contributes a paper on this subject to the Indianapolis Medical Journal for May 15, 1909, at the close of which he sets forth his "Credo," to which, for the present, he pins his surgical faith and which admirably summarizes most of the points elucidated in his article. It is as follows: I believe every cancer represents an effort of nature to repair an injury. I believe every cancer is originally local and remains local for a time. I believe cancer of the stomach should not be treated, but removed. I believe in removing indurated deposit involving any portion of the stomach. I believe the diagnosis ought to be made after the specimen is removed. I believe the recorded word of good and great men who say they have patients now living eight, ten and more years after operation. I believe every stomach tumor should be examined through an incision. I believe every unidentified epigastric tumor should be looked upon as pyloric cancer. I believe eight-tenths of all the cases of dilated stomachs have cancerous necks. I believe exact diagnosis cannot be made without exploratory incision. I believe the mortality is high because we are still operating on large growths and complicated cases. I believe prolonged treatment of stomach disease usually means no diagnosis. I believe no diagnosis is worse than wrong diagnosis, one can be corrected, the other cannot. I believe more stomach cases should be given the benefit of the doubt and less dope. I believe I would rather make a mistake trying to do than trying to avoid a mistake. And finally, I believe I shall chance those beliefs, or modify them, or add to them as new light comes to me.

Dr. S. Weir Mitchell delivered the address at the dedication of the new building of the Medical and Chirurgical Faculty of Maryland, May 13. Dr. James Tyson spoke for the College of Physicians of Philadelphia. Maryland is one of the few state societies to own its own home. The society was chartered in 1799 for the purpose of protecting the public from quackery and incompetence and promoting medical culture. In 1830 every one of the six hundred physicians in the state was a member, and a library committee was appointed. The new structure is fireproof and the library contains stacks for 60,000 volumes.

TO THE FRONT SAINT LOUIS

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A Cosmopolitan, Biweekly for the General Practitioner

The Medical Fortnightly is devoted to the progress of the Practice and Science of Medicine and Surgery. Its aim is to present topics of interest and importance to physicians, and to this end, in addition to a well-selected corps of Department Editors, it has secured correspondents in the leading medical centers of Europe and America. Contributions of a scentific nature, and original in character, solicited. News of Societies, and of interesting medical topics, cordially invited.

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The Nebraska College of Medicine located at Lincoln, graduated a class of nine on May 20. This will be the last graduating class, as this school has gone out of existence in the interest of higher education in medicine.

Dr. William J. Goodhue, of Kalaupapa, Hawaii, has been selected United States representative at the World's Leprosy Congress which meets at Christiana, Norway, this year. The doctor has been physician at the Leper Settlement of the Hawaiian Islands for the past four years.

A neurological institute for the treatment and study of nervous disorders is to be founded in New York, through the efforts of two specialists in nervous diseases, and the subscriptions of a number of wealthy men. More than $100,000 has already been subscribed, and the construction of a building will begin as soon as a suitable site can be procured.

MEDICAL MEMORANDA.

International Medical Congress.—Physicians who are contemplating a trip to Budapest, to attend the Congress, will find it to their advantage to join the American Party that is being organized by Dr. Chas. Wood Fassett, of St. Joseph. A 41-day trip for $395, including hotel bills and all expenses, has been arranged, with privilege of returning later if desired.

Triacol (Alpers) possesses all the beneficial properties of creosote and guaiacol without any of their drawbacks. It is not a secret remedy. It is never advertised to the public. It does not pretend to give the patient any advice. Diagnosis and treatment are left to the physician, who, after trying a sample, will always prescribe it. Sample and literature on application to the Alpers Chemical Company, 15 Wall street, New York.

Johann Hoff's Malt with Iron; Its Uses in Disease.—There is every reason to conclude from experiment, analogy, practice—that the effects of iron and manganese together are more powerful in chlorosis and anemia than when they are used separately, and, that organic compounds are more useful than the inorganic. Organic compounds are more easily digested, assimilated, and absorbed. And when they are palatable, as in Johann Hoff's malt extract, the blood receives them more largely.

Warning.—Physicians are especially warned against the substitution of tincture of iodine (liquor iodi compositus, U.S.P.) for Burnham's soluble iodine. Any comparison or suggestion that this product might be an equally available substitute is wholly erroneous and fraught with extreme danger and injustice to all concerned. Burnham's soluble iodine is given internally and hypodermically in large doses, if needed, with perfect safety and total absence of irritation and other objectionable and dangerous results, which every physician knows would attend the use of the U. S. P. tincture of iodine, when given in like manner. Original one-half or one ounce bottles should be specified when possible.

Entero-Colitis and Cholera Infantum.—The following advice from the pen of a well-known Denver physician, will be found to be most seasonable and helpful in the treatment of entero-colitis: "Cleanse the intestinal tract with calomel and a saline or with castor oil, prescribe a suitable diet, easily digested and non-irritating. Irrigate the rectum and colon at suitable intervals with normal salt solution or some mild antiseptic, using for the purpose a soft rubber catheter or colon tube. Instead of opiates, which lock up the secretions and thereby favor auto-intoxication, relieve the muscular rigidity and the excruciating pain which is such a drain upon the vital forces by the use of antiphlogistine as hot as can be borne over the entire abdominal walls and covered with absorbent cotton. If the patient is not too far gone, the effect will be astonishing. The little drawn faced patient, who until now has been suffering severely, will in most cases soon quiet down; the agonized expression will leave the face and restful slumber supervene, thus starting the child upon the road to recovery."

The After Care of Operative Cases.—It is a fact well established by hematologists, and well known to the surgeon, that a large majority of of surgical diseases, requiring operative interference, are preceded, accompanied or followed by hemolytic changes. In addition to the more or less devitalizing effect of the original condition which brings the patient to the operating table, the necessary anesthesia, if at all prolonged, reduces the hemoglobin percentage and the shock incident to the operation contributes, to a certain extent, to the surgical anemia. Hemorrhage, suppuration or sepsis, precedent to the use of the knife, of course intensifies the post-operative chlor-anemia and renders more than ever necessary the employment of hematogenic measures during surgical convalescence. Judicious but generous feeding is of prime importance in such cases and sedulous attention should therefore be paid to the patient's dietetic

requirements. Feeding, alone, however, will not hasten recovery as rapidly as a judicions combination of feeding with a hematinic reconstituent such as pepto-mangan (Gude). Except in cases in which it is not permissible to introduce food or medicine through the mouth, this palatable, readily tolerable and promptly absorbable organic combination of iron and manganese is distinctly indicated in preference to other building agents, because it is agreeable, non-irritant and free from constipating effect. Its hematinic, appetizing and general reconstituent properties are quickly evidenced subjectively, by a general feeling of well-being; objectively by increased color of skin and mucus membrane, and hematologically, by a progressive increase in the number of erythrocytes and percentage of hemoglobin.

Dyspepsia.—(By S. B. McDowell, M. D., Philadelphia.)—"While many of the causes of indigestion may be traceable to faulty secretion of gastric and intestinal fluids as well as general lack of tone in the muscular structure of the tract, still the great proportion of these cases comes from eating too fast. Even under the most favorable conditions, with the best of teeth, rapid mastication cannot properly divide and break up the food particles and bring about the necessary admixture of salivary secretion. Hand in hand with hurried feeding comes over-feeding, and these two evils soon bring about pathological conditions which inhibit or prevent normal processes of digestion and assimilation. Lumps of foods taken into the stomach which cannot properly prepare them for the digestive processes of the intestine, act as mechanical irritants to the sensitive gastric membrane, while decomposition and accompanying fermentation tends to further congest the liniug membrane and its glandular bodies. Restoration of the defective secretion is our first consideration, and to this end the treatment is directed toward active depletion of the congested membrane by antiseptic measures which encourages exosmosis, thus increasing capillary circulation and gland activity and at the same time guard against hyperacidity. This course combined with thorough mastication of food and regularity of meals will bring about a speedy relief in a manner that cannot be accomplished by artificial digestants. Self-made dyspeptics are cured by this common sense treatment and can eat anything they may choose. Prepare the stomach for the reception of the meal in the following manner: One hour before meals take glyco-thymoline pure, two to four drams; five minutes later drink a full glass of hot water. In conjunction with this, and it is most important, have your patient masticate each mouthful of food taken at least twenty times before swallowing. When the claim is made that this will cure any case of indigestion, a fact is stated. The principle is a simple one." Glyco-thymoline soothes the irritated membrane and through its physiological properties, produces a rapid reduction of existing engorgement by exosmosis, stimulates capillary circulation and restores normal gland secretion. The thick accumulations of mucus adhering to the gastric walls are dissolved and the full glass of hot water taken five minutes later serves to wash out any undissolved portions which pass off before the meal is eaten. This leaves the stomach properly cleansed and in a condition that readily allows the admixture of peptic secretion and ingested food. The frequedt chewing of each mouthful of food taken is positively necessary as a large proportion of our food is starchy in character and requires complete mastication and admixture of the salivary secretion in order that the ptyalin, its digestive principle, can come in contact with and transform each particle of starch into sugar ready for assimilation. This is a simple physiological method of aiding in the establishment of a normal condition, differing entirely from the usual method of using animal ferments to aid digestion, the ultimate result of which is to still further weaken the already partly atrophied digestive glands. This treatment will improve and to a large extent overcome abnormal conditions, such as constipation, sleeplessness, mental depression, etc., dependent upon indigestion.